

CLAIMS

What is claimed is:

1. A hand-writing device for inputting characters, comprising:
an input surface;
a guidance device provided on said input surface and extending along a predetermined track for guiding hand-writing strokes to follow said predetermined track; and,
a plurality of switch elements provided at positions on said predetermined track, at least certain of said switch elements being triggered by a hand-writing stroke to produce an output signal when a specific character is input by hand-writing, and wherein the combination of the output signals of said triggered switch elements correspond to the inputted character.
2. A hand-writing input device according to claim 1, wherein said predetermined track is a pattern composed of a first plurality of lengths and a second plurality of lengths, said first plurality of lengths including the lengths between each two adjacent points of a first plurality of points (P_i) sequentially arranged on a closed curve, and said second plurality of lengths is formed by a length starting from a point inside of said closed curve and ending at each of the second plurality of points (P_j) on said closed curve.
3. A hand-writing input device according to claim 2, wherein said first plurality of lengths includes six lengths (P₁P₂, P₂P₃, P₃P₄, P₄P₅, P₅P₆, and P₆P₁), which are formed by the curve between each two adjacent points of said first plurality of points (P₁, P₂, P₃, P₄, P₅ and P₆) sequentially arranged on said closed curve, and said second plurality of lengths includes six lengths (P₀P₁, P₀P₃, P₀P₄, P₀P₅, P₀P₆), which are formed by the length starting

from a point (P0) inside of the closed curve and ending at each of the second plurality of points (P1, P2, P3, P4, P5 and P6).

4. A hand-writing input device according to claim 2, wherein said first plurality of lengths includes six lengths (P1P2, P2P3, P3P4, P4P5, P5P6, and P6P1), which are formed by the curve between each two adjacent points of said first plurality of points (P1, P2, P3, P4, P5 and P6) sequentially arranged on said closed curve, and said second plurality of lengths includes two lengths (P0P1 and P0P4) which are formed by the length starting from a point (P0) inside of the closed curve and ending at each of said second plurality of points (P1 and P4).

5. A hand-writing input device according to claim 2, wherein said first plurality of lengths includes six lengths (P1P2, P2P3, P3P4, P4P5, P5P6, and P6P1), which are formed by the curve between each two adjacent points of said first plurality of points (P1, P2, P3, P4, P5 and P6) sequentially arranged on said closed curve, and said second plurality of lengths includes eight lengths (P0P1, P0P2, P0P23, P0P3, P0P4, P0P5, P0P56 and P0P6), which are formed by the length starting from a point (P0) inside of the closed curve and ending at each of the second plurality of points (P1, P2, P23, P3, P4, P5, P56 and P6).

6. A hand-writing input device according to claim 2, wherein the pattern formed by the first plurality of lengths and the second plurality of lengths is substantially axially symmetric.

7. A hand-writing input device according to claim 2, wherein the pattern formed by the first plurality of lengths and the second plurality of lengths is substantially axially symmetric.

8. A hand-writing input device according to claim 2, wherein the closed curve formed by said first plurality of lengths is one from the group including a rectangle, an ellipse, and a figure 8.

9. A hand-writing input device according to claim 2, wherein said plurality of switch elements are positioned on each of said first plurality of lengths, and on at least one of the two lengths (P1P0 and P0P4) in said second plurality of lengths.

10. A hand-writing input device according to claim 1, wherein said guidance device comprises a visual guidance device including a visual guide track.

11. A hand-writing input device according to claim 1, wherein said guidance device comprises a recess having one of said switch elements therein.

12. A hand-writing input device according to claim 1, wherein said guidance device comprises a protrusion having one of said switch elements thereon.

13. A hand-writing input device according to claim 11, wherein the cross-section of said recess is substantially trapezoidal.

14. A hand-writing input device according to claim 11, wherein the cross-section of said recess is substantially semicircular.

15. A hand-writing input device according to claim 12, wherein the cross-section of said protrusion is substantially trapezoidal.

16. A hand-writing input device according to claim 12, wherein the cross-section of said protrusion is substantially semicircular.

17. A hand-writing input device according to claim 1, wherein said switch element is a resistive switch.

18. A hand-writing input device according to claim 1, wherein said switch element is an electro-optical switch.

19. A hand-writing input device according to claim 1, wherein said switch element is a capacitive switch.

20. A hand-writing input device according to claim 1, wherein said input surface includes a touch sensitive screen.

21. A hand-writing input device according to claim 20, wherein said resistive switch comprises a keypad defined on said touch sensitive screen.

22. A hand-writing input device according to claim 1, wherein said input characters include numerals, letters and characters defined by the user.

23. A hand-writing input device according to claim 1, wherein the hand-writing input device further includes a micro-processor unit and a memory, said micro-processor unit obtaining codes of characters corresponding to said switch signal combinations from a predetermined inquiry table stored in said memory.

24. A hand-writing input device according to claim 20, wherein the hand-writing input device further includes a micro-processor unit and a memory, said micro-processor unit obtaining codes of characters corresponding to said switch signal combinations from a predetermined inquiry table stored in said memory based on the combination of switch signals produced by said touch sensitive screen.

25. A hand-writing input device according to claim 23, wherein the hand-writing device further includes a serial output interface

26. A hand-writing input device according to claim 23, wherein the hand-writing device further includes a parallel communication output interface.

27. A hand-writing input device according to claim 23, wherein the hand-writing device further includes a USB output interface.

28. A hand-writing input device according to claim 23, wherein the hand-writing device further includes an infrared output interface.

29. A hand-writing input device according to claim 23, wherein the hand-writing device further includes a blue-tooth output interface.